PATENT COOPERATION TREATY

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PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing (day/month/year) **13 FEB 2002**	

Applicant's or agent's file reference

T711-01PCT

IMPORTANT NOTIFICATION

International application No.	International filing date (day/month/year)	Priority Date (day/month/year)
PCT/US00/12710	10 MAY 2000	10 MAY 1999

Applicant

EXPANSE NETWORKS, INC.

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1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

   The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

   Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

   For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference T711-01PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/12710	International filing date *(day/month/year)* 10 MAY 2000	Priority date *(day/month/year)* 10 MAY 1999	
International Patent Classification (IPC) or national classification and IPC IPC(7): H04N 7/16 and US Cl.: 725/35			
Applicant EXPANSE NETWORKS, INC.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of ___5___ sheets.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of ___36___ sheets.

3. This report contains indications relating to the following items:

    I ☒ Basis of the report

    II □ Priority

    III □ Non-establishment of report with regard to novelty, inventive step or industrial applicability

    IV □ Lack of unity of invention

    V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

    VI □ Certain documents cited

    VII □ Certain defects in the international application

    VIII □ Certain observations on the international application

Date of submission of the demand 08 DECEMBER 2000	Date of completion of this report 19 OCTOBER 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

I. Basis of the report

1. With regard to the elements of the international application: *

☐ the international application as originally filed

☒ the description:

pages _____ (See Attached) _____ , as originally filed

pages _____ , filed with the demand

pages _____ , filed with the letter of _____

☒ the claims:

pages _____ (See Attached) _____ , as originally filed

pages _____ , as amended (together with any statement) under Article 19

pages _____ , filed with the demand

pages _____ , filed with the letter of _____

☒ the drawings:

pages _____ (See Attached) _____ , as originally filed

pages _____ , filed with the demand

pages _____ , filed with the letter of _____

☒ the sequence listing part of the description:

pages _____ (See Attached) _____ , as originally filed

pages _____ , filed with the demand

pages _____ , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/ or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the writen sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages_____ NONE _____

☒ the claims, Nos. _____ 30,53,91 _____

☒ the drawings, sheets/fig _____ NONE _____

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Inventive Step (IS)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO
Industrial Applicability (IA)	Claims	(Please See supplemental sheet)	YES
	Claims	(Please See supplemental sheet)	NO

2. citations and explanations (Rule 70.7)

Claims 1-29, 31-33, 38-52, 54-57, 62-67, 78-85, 89-90, 92-103, 109 and 114-116 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest a method for presenting targeted advertisements in a telecom system, the method comprising forming a group for the reception of signals, forming a plurality of subgroups for the group, assigning a subgroup address, receiving a program stream, selecting one or more targeted advertisements, assigning an advertisement identifier, creating a relationship and transmitting the program stream; or forming a group, forming a plurality of subgroups, wherein the subgroups are formed by using multicast addresses based on Internet multicasting protocol in combination with the steps of receiving, selecting and transmitting; or forming a group, forming a plurality of subgroups in combination with the steps of receiving, selecting and transmitting video and audio channels over the Internet; or

forming a group of signals, wherein the signals are Internet based streaming video signals, forming a plurality of subgroups in combination with the steps of receiving, selecting and transmitting; or transmitting first and second targeted advertisements to first and second subgroup of client receivers using a multicast protocol, wherein both program stream, advertisement or both are delivered over a DOCSIS channel; or

identifying, forming at least first and second subgroups wherein members of the first subgroup share a first common IP multicast address and members of the second subgroup share a second common IP multicast address in combination with the steps of creating, combining and transmitting; or identifying, forming at least a first and second subgroups, wherein the subgroups are formed based on at least one attribute from a set of attributes consisting of geographic, demographic, psychographic, and preference attributes deduced from a subscriber's IP address; or

forming a group of clients for the reception of streaming media program, forming a plurality of subgroups for the group, wherein each subgroup represents one or more target markets in combination with the steps of combining and transmitting as recited in the claims.

(Continued on Supplemental Sheet.)

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII   Sheet 10

I. BASIS OF REPORT:

This report has been drawn on the basis of the description,
page(s) 1-24 , as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
Pages 2, 2a, 2b and 2c filed with the letter of 06 February 2001

This report has been drawn on the basis of the claims,
page(s) NONE as originally filed.
page(s) NONE. as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:

Pages 25-29, 29a-29z and 29aa, filed with the letter of 28 August 2001

This report has been drawn on the basis of the drawings,
page(s) 1-11 , as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

V. 1. REASONED STATEMENTS:
The report as to Novelty was positive (YES) with respect to claims 1-29, 31-33,38-52, 54-57,62-67,78-85,89-90, 92-103,109,114-116.
The report as to Novelty was negative (NO) with respect to claims 34-37, 58-61, 68-77,86-88, 104-108, 110-113.
The report as to Inventive Step was positive (YES) with respect to claims 1-29, 31-33,38-52, 54-57,62-67,78-85,89-90, 92-103,109,114-116.
The report as to Inventive Step was negative (NO) with respect to claims 34-37, 58-61, 68-77,86-88, 104-108, 110-113.
The report as to Industrial Applicability was positive (YES) with respect to claims 1-29, 31-52, 54-90, 92-116.
The report as to Industrial Applicability was negative (NO) with respect to claims NONE .

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):
Claims 34-37, 58-61, 68-77, 86-88, 104-108 and 110-113 lack novelty under PCT Article 33(2) as being anticipated by Hendricks et al. (Hendricks).
Considering claims 58, 59, 69-77, 86-88, 104, 105, 107, 108 and 110-113, Hendricks discloses a method and corresponding system for presenting targeted advertisements in a telecom system, the method comprising:
a) forming a group for reception of signals....(the group of cable subscribers as oppose to regular broadcast as described throughout the entire reference);
b) forming a plurality of subgroups for the group (i.e. targeted viewers or groups in the larger group of cable television subscribers as described in columns 15, 16, 36 and illustrated in figures 16-20);
c) receiving a program stream (205) (col. 14, line 59 - col. 15, line 40);
d) selecting one or more targeted advertisement (col. 15, lines 40-54);
e) combining streaming media with advertisements (246-figure 6a or 264-figure 7); and
f) transmitting the streaming media program stream (col. 21, line 65 - col. 22, line 11).

Claims 60, 61 are met by the multiple subgroups (targeted groups) described throughout the reference including but not limited to figures 16-20 and columns 15, 16 and 36.

Claims 68 and 106 are met by "on the fly programming" disclosed in col. 15, lines 55-67.

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII   Sheet 11

Considering claim 34, Hendricks discloses a method for presenting targeted advertisement comprising:
a) receiving n streaming media program streams (205)(col. 14, line 59 - col. 15, line 40);
b) receiving m streaming media advertisement streams...(col. 15, lines 40-54); and
c) creating p streaming media presentation streams...(col. 21, line 65 - col. 22, line 11).

Claims 35-37 are met by the presentations streams transmitted to subgroups (i.e. targeted viewers or groups) in the larger group of cable television subscribers as described in columns 15, 16, 36 and illustrated in figures 16-20.

-------------------- NEW CITATIONS --------------------
US 5,600,364 A (HENDRICKS et al.) 04 February 1997,
column 6, lines 40-43.
column 15, line 40 - column 16, line 42.

and then distributed to the nodes and ultimately to the subscribers.

The transmission of the programming based on specific geographic areas continues to exist, especially in cable-based
5 systems and satellite-based systems, but is substantially affected by the advent of the Internet. In the Internet environment, the information contents may be received from any computer on the network, irrespective of where the subscriber is located. Furthermore, in the Internet environment, the
10 information contents may be customized based on subscriber needs and preferences.

In all of the above-mentioned systems, including cable-based, satellite-based and Internet-based systems, the program contents also include one or more advertisements. These
15 advertisements are generally inserted in the program streams by evaluating the program contents, making a rough determination of the target audience, and finding suitable advertisements. For example, beer advertisements may be inserted into the football game programming, and gardening tools advertisements
20 may be inserted into home improvement programming. In cable-based and satellite-based systems, these advertisements are generally displayed as spot messages, and in the Internet environment, these advertisements are displayed as banner advertisements.

25 Internet environments also provide for multicasting where audio and video streams are simultaneously transmitted to a plurality of subscribers. The subscribers are grouped based on the type of program contents they receive, but there is no distinction for the purpose of advertising.

30 U.S. Patent No. 4,745,549 provides a method and apparatus of optional scheduling of television programming to maximize customer satisfaction. In particular, the invention provides for extracting programs suitable for individual subscriber tastes among all available television programs and for editing
35 an individual subscriber television program list.

U.S. Patent No. 5,099,319 provides a satellite system that delivers customized advertising from a central site to any

-2-

number of locations in a geographical area. Additionally, the invention provides for customized advertising at a remote site, using the downlink computer and the content data signals, and as appropriate, combines the customized content data signals

5   with locally originated content data signals.

U.S. Patent No. 5,223,994 provides a user interface which can access downloaded TV program information which can be continually updated and can provide either "over the air", over cable or satellite transmission paths or other "fast data"

10   paths, and to automatically correlate this information with the preferences of the user to create at least one program information database based upon the results of the correlation.

U.S. Patent No. 5,400,166 provides a single optical source that is shared by a plurality of optical communication paths to

15   communicate different information signals on the different paths. In particular, a high-power optical carrier generator provides a carrier signal to an optical multiplexer. The multiplexer splits the optical carrier into a plurality of paths, each including an external optical modulator.

20   U.S. Patent No. 5,457,562 provides alternative methods and apparatus for introducing narrow-cast transmission signals into a fiber optic broadcast network utilizing rare-earth-doped fiber amplifier technology. This permits narrowcast signals to be advantageously transmitted over portions of new or existing

25   global optical networks previously used for broadcast signals. One or more narrowcast signals at selected points in the networks are introduced and at varying signal power, depending upon the selected transmission wavelength of the particular narrowcast signal and the number of subscribers (or other

30   recipients) the narrowcast signal is intended to reach.

U.S. Patent No. 5,600,366 provides for digital ad insertion methods and apparatus that permit timely and correct switchovers from network programming to local advertising in ways which occur smoothly without a disruption in perception to

35   the viewer. Switchovers occur at packet or frame boundaries and are designed to occur upon detection of idle information from a network source.

U.S. Patent No. 5,612,742 provides a virtually random and
on-demand access that provides to a virtually unlimited number
of subscribers by partitioning the video program into an
ordered sequence of n segments and providing the subscriber's
5 concurrent access to each of the n subsequences. A data stream
representative of the video program is partitioned into n
subsequences, each representative of one of the n segments.
The data of each of the n subsequences is organized as an
ordered sequence of elements. The elements of each of the n
10 subsequences are interleaved.

U.S. Patent No. 5,761,601 provides systems and methods for
distributing full motion video media, usually in the form of
advertisements to a plurality of businesses such as retail
stores that are dispersed over a wide geographical area. The
15 programs are transmitted from a distribution center to a
multitude of receiving sites via satellite and are receivable
via antennae at the receiving sites. The invention provides
for customizing video programs for particular target audiences
or markets.

20   U.S. Patent No. 5,774,170 provides for a system and a
method for delivering targeted advertisements to consumers.
The invention enhances television (and radio) advertising by
targeting, delivering and displaying electronic advertising
messages (commercials) within specified programming in one or
25 more pre-determined households or on specific display devices
while simultaneously preventing a commercial from being
displayed in other households or on other displays which are
not intended.

U.S. Patent No. 5,926,205 provides a method and apparatus
30 for encoding and formatting data representing a video program
to provide multiple overlapping presentation of the video
program. A selective video-on-demand access is provided to a
virtually unlimited number of subscribers by partitioning the
video program into an ordered sequence of N segments. The
35 elements of each of the N segments are interleaved and the
interleaved data stream is continuously transmitted over a
video program distribution medium.

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U.S. Patent No. 5,966,120 provides a system for providing efficient constant bit rate distribution of variable bit-rate encoded video programs while facilitating the distribution of encoded video programs, along with auxiliary data of a general

5   character, to one or more receivers. At a particular receiver, a customized augmented video program is created by inserting selected portions of the auxiliary data into a selected encoded video program. The encoded video portion of the augmented video program can be transmitted, decoded and displayed in real

10   time but can be stored locally at the receiver for real-time presentation at a later time.

U.S. Patent No. 6,006,257 provides a system enabling a user to dispose information such as an icon to identify the article that the user posts from the client computer. A server

15   computer where many client computers can post articles and read the articles posted from other client computers is also presented. Thus, the invention provides an interactive advertising system wherein the content of advertising is dependent upon prior interactions with the receiver of the

20   advertising.

Thus, even though prior art advertising schemes try to match the program contents and the advertisements that are displayed within the program contents, such advertisement schemes are not fully effective. What is lacking in these

25   advertising schemes is the idea of targeted advertising, i.e., presenting different advertisements to different subscribers based on one or more subscriber characteristics, or different

Claims

What is claimed is:

1. A method for presenting targeted advertisements in a telecom system, the method comprising:

5   forming a group for the reception of signals for the telecom system;

       forming a plurality of subgroups for the group;

       assigning a subgroup address to each subgroup;

       receiving a program stream;

10   selecting one or more targeted advertisements for a first subgroup;

       assigning an advertisement identifier to each of the targeted advertisements;

       creating a relationship between the subgroup address and

15 the one or more advertising identifiers; and

       transmitting the program stream and the targeted advertisements selected for the first subgroup to the first subgroup.

20   2. The method of claim 1, further comprising:

       selecting one or more targeted advertisements for a second subgroup; and

transmitting the program stream and the advertisements
selected for the second subgroup to the second subgroup.

3.   The method of claim 2, wherein said transmitting to
5   the first subgroup and said transmitting to the second subgroup
are performed simultaneously.

4.   The method of claim 1, wherein the subgroups are
formed by using multicast addresses.

10

5.   A method for presenting targeted advertisements in a
telecom system, the method comprising:

forming a group for the reception of signals for the
telecom system;

15   forming a plurality of subgroups for the group, wherein
the subgroups are formed by using multicast addresses [are]
based on Internet multicasting protocol;

receiving a program stream;

selecting one or more targeted advertisements for a first
20 subgroup; and

transmitting the program stream and the targeted
advertisements selected for the first subgroup to the first
subgroup.

AMENDED SHEET

6.   The method of claim 1, wherein the subgroups are based on cable nodes.

7.   The method of claim 1, wherein the subgroups are
5   formed by transmitting an MPEG signal over a cable television network.

8.   The method of claim 1, wherein the subgroups are based on demographic attributes.

10

9.   The method of claim 1, wherein the subgroups are based on psychographic attributes.

10.   The method of claim 1, wherein the subgroups are
15 based on product and brand usage attributes.

11.   The method of claim 1, wherein said transmitting includes multiplexing the program stream and the selected target advertisements at a centralized point to create a
20 presentation stream.

12.   The method of claim 11, wherein said multiplexing is performed in real-time.

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AMENDED SHEET

13.   The method of claim 11, wherein the selected target advertisements are stored temporarily in a storage for insertion at a later time.

5   14.   The method of claim 11, wherein the program stream comprises one or more empty segments and during multiplexing the selected targeted advertisements are inserted in the empty segments.

10   15.   The method of claim 11, wherein the program stream comprises one or more default advertisements and during multiplexing the default advertisements are substituted with the selected targeted advertisements.

15   16.   The method of claim 1, further comprising inserting the selected targeted advertisements in the program stream at a client side.

         17.   The method of claim 16, wherein the client side is
20   provided with the insertion time and the identification of the selected target advertisements.

18.   The method of claim 16, wherein the program stream comprises one or more empty segments and the identification of these empty segments is transmitted to the client side

5   19.   The method of claim 16, wherein the program stream comprises one or more default advertisements, and at the client side, the default advertisements are substituted with the selected targeted advertisements.

10   20.   The method of claim 1, wherein n program streams are combined with m advertisement streams resulting in p presentation streams, wherein p is greater than n.

          21.   The method of claim 1, wherein the program stream is
15   transmitted as a first digital signal and the targeted advertisements are transmitted as a second digital signal.

          22.   The method of claim 21, wherein the first digital signal is transmitted to the whole group and the second digital
20   signal is transmitted only to a subgroup.

          23.   The method of claim 21, wherein the first digital signal is transmitted via a digital transport network over a

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AMENDED SHEET

first channel and the second digital signal is transmitted over

a second channel.

24. The method of claim 23, wherein the first channel is

5 a digital cable television channel and the second channel is a

digital data channel in a cable television system.

25. A method for presenting targeted advertisements in a

telecom system, the method comprising:

10 forming a group for the reception of signals for the

telecom system;

forming a plurality of subgroups for the group;

receiving a program stream;

selecting one or more targeted advertisements for a first

15 subgroup; and

transmitting the program stream and the targeted

advertisements selected for the first subgroup to the first

subgroup, wherein the program stream is transmitted as a

streaming video channel over the Internet and the targeted

20 advertisements are transmitted as an audio channel over the

Internet.

26. A method for presenting targeted advertisements in a

telecom system, the method comprising:

forming a group for the reception of signals for the

telecom system;

forming a plurality of subgroups for the group;

receiving a program stream;

5   selecting one or more targeted advertisements for a first

subgroup; and

transmitting the program stream and the targeted

advertisements selected for the first subgroup to the first

subgroup as streaming video channels over the Internet.

10

27.   The method of claim 1, wherein the signals are cable-

based video signals.

28.   The method of claim 1, wherein the signals are

15   broadcast-based video signals.

29.   A method for presenting targeted advertisements in a

telecom system, the method comprising:

forming a group for the reception of signals for the

20   telecom system, wherein the signals are Internet-based

streaming video signals;

forming a plurality of subgroups for the group;

receiving a program stream;

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selecting one or more targeted advertisements for a first

subgroup; and

transmitting the program stream and the targeted

advertisements selected for the first subgroup to the first

5   subgroup.

31.   The method of claim 1, wherein the targeted

advertisements are inserted into the program stream based on

the advertisement identifiers.

10

32.   The method of claim 31, wherein the insertion occurs

at a centralized point.

33.   The method of claim 31, wherein the insertion occurs

15   at a local end.

34.   A method for presenting targeted advertisement

comprising:

receiving n streaming media program streams, wherein the

20   streaming media program streams include continuous programming

material;

receiving m streaming media advertisement streams, wherein
the streaming media advertisement streams include advertising
material; and

creating p streaming media presentation streams, wherein
5 the p streaming media presentation streams contain continuous
programming and at least one of the m streaming media
advertisements, and wherein p is greater than n.

35. The method of claim 34, wherein the p presentation
10 streams are transmitted to p subgroups.

36. The method of claim 35, wherein the p subgroups
belong to a group.

15 37. The method of claim 35, wherein each of the p
subgroups receives the same program stream.

38. A method for presenting targeted advertisements in a
telecom system, the method comprising:

20 forming a group for reception of signals from the telecom
system;

forming a plurality of subgroups for the group;

assigning a subgroup address to each subgroup;

receiving a program stream;

selecting one or more targeted advertisements for a first subgroup;

assigning an advertisement identifier to each of the

5   selected targeted advertisements;

creating a relationship between each subgroup address and each advertising identifiers;

multiplexing the program stream and the selected targeted advertisements at a centralized location to create a first

10 presentation stream; and

transmitting the first presentation stream to the first subgroup.

39. The method of claim 38, further comprising:

15   selecting one or more targeted advertisements for a second subgroup;

multiplexing the program stream and the selected targeted advertisements for the second subgroup at a centralized location to create a second presentation stream; and

20   transmitting the second presentation stream to the second subgroup.

40. The method of claim 39, wherein said transmitting to the first subgroup and said transmitting to the second subgroup are performed simultaneously.

5   41. The method of claim 38, wherein the subgroups are formed by using multicast addresses.

42. A method for presenting targeted advertisements in a telecom system, the method comprising:

10   forming a group for reception of signals from the telecom system;

forming a plurality of subgroups for the group, wherein the subgroups are formed by using multicast addresses [are] based on Internet multicasting protocol;

15   receiving a program stream;

selecting one or more targeted advertisements for a first subgroup;

multiplexing the program stream and the selected targeted advertisements at a centralized location to create a first

20 presentation stream; and

transmitting the first presentation stream to the first subgroup.

43.   The method of claim 38, wherein the subgroups are based on cable nodes.

44.   The method of claim 38, wherein the subgroups are

5 formed by transmitting an MPEG signal over a cable television network.

45.   The method of claim 38, wherein the subgroups are based on demographic attributes.

10

46.   The method of claim 38, wherein the subgroups are based on psychographic attributes.

47.   The method of claim 38, wherein the subgroups are

15 based on product and brand usage attributes.

48.   The method of claim 38, wherein said multiplexing is performed in real-time.

20   49.   The method of claim 38, wherein the selected target advertisements are stored temporarily in storage for insertion at a later time.

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50.   The method of claim 38, wherein the program stream comprises one or more empty segments and during said multiplexing the selected targeted advertisements are inserted in the empty segments.

5

51.   The method of claim 38, wherein the program stream comprises one or more default advertisements and during said multiplexing the default advertisements are substituted with the selected targeted advertisements.

10

52.   The method of claim 38, wherein n program streams are combined with m advertisement streams resulting in p presentation streams, wherein p is greater than n.

15   54.   The method of claim 38, wherein the selected targeted advertisements are inserted into the program stream based on the advertisement identifiers.

55.   In a telecommunications network a method for
20 presenting targeted advertisements in conjunction with program content, the method comprising:

identifying a group of clients for reception of at least one program;

forming a plurality of client subgroups from the group of clients, wherein the plurality of client subgroups contains at least a first subgroup and a second subgroup which are formed based on Internet multicasting protocols;

5   selecting a first targeted advertisement for the first subgroup;

selecting a second targeted advertisement for the second subgroup;

transmitting the first targeted advertisement to clients

10   of the first subgroup;

transmitting the second targeted advertisement to the clients of the second subgroup;

presenting to the clients of the first subgroup the first targeted advertisement in conjunction with the program; and

15   presenting to the clients of the second subgroup the second targeted advertisement in conjunction with the program.

56.   The method of claim 55, wherein the transmission of the targeted advertisements to the first subgroup is a first

20   multicast transmission and transmission of the targeted advertisements to the second subgroup is a second multicast transmission.

AMENDED SHEET

57. The method of claim 55, wherein only those advertisements targeted for the first subgroup are transmitted to and received by the first subgroup and only those advertisements targeted for the second subgroup are transmitted

5 to and received by the second subgroup.

58. In a telecommunications network a method for presenting targeted advertisements in conjunction with program content, the method comprising:

10 identifying a group of clients for reception of at least one program, wherein the program is a streaming media program;

forming a plurality of client subgroups from the group of clients, wherein the plurality of client subgroups contains at least a first subgroup and a second subgroup;

15 selecting a first targeted advertisement for the first subgroup;

selecting a second targeted advertisement for the second subgroup;

transmitting the first targeted advertisement to clients

20 of the first subgroup;

transmitting the second targeted advertisement to the clients of the second subgroup;

presenting to the clients of the first subgroup the first targeted advertisement in conjunction with the program; and

presenting to the clients of the second subgroup the

second targeted advertisement in conjunction with the program.

59.   In a telecommunications network a method for

5 presenting targeted advertisements in conjunction with program

content, the method comprising:

identifying a group of clients for reception of at least

one program;

forming a plurality of client subgroups from the group of

10 clients, wherein the plurality of client subgroups contains at

least a first subgroup and a second subgroup;

selecting a first targeted advertisement for the first

subgroup;

selecting a second targeted advertisement for the second

15 subgroup, wherein the targeted advertisements are streaming

media advertisements;

transmitting the first targeted advertisement to clients

of the first subgroup;

transmitting the second targeted advertisement to the

20 clients of the second subgroup;

presenting to the clients of the first subgroup the first

targeted advertisement in conjunction with the program; and

presenting to the clients of the second subgroup the

second targeted advertisement in conjunction with the program.

60.   The method of claim 59, wherein the targeted advertisements are presented in conjunction with the program by a client streaming media player.

5   61.   The method of claim 60, wherein the targeted advertisements are received by the respective clients before the presentation time and are buffered in the client streaming media player until they are presented.

10   62.   The method of claim 55, wherein the presentation of the targeted advertisements occurs before the program, at the beginning of the program, after the program, at the end of the program, or during the program.

15   63.   The method of claim 55, wherein the targeted advertisement presented to the first subgroup and the targeted advertisement presented to the second subgroup are presented to the client members of the respective subgroups at or about the same time within the program sequence.

20

64.   The method of claim 55, wherein each subgroup represents a target market.

65. The method of claim 55, wherein the subgroups are formed based on at least one attribute from a set of attributes consisting of: geographic, demographic, psychographic, and preference attributes.

5

66. In a telecommunications network a method for presenting targeted advertisements in conjunction with program content, the method comprising:

identifying a group of clients for reception of at least

10 one program;

forming at least a first subgroup and a second subgroup from the group of clients, wherein the subgroups are formed based on at least one attribute from a set of attributes consisting of geographic, demographic, psychographic, and

15 preference attributes that are deduced from a subscriber's IP address;

selecting a first targeted advertisement for the first subgroup;

selecting a second targeted advertisement for the second

20 subgroup;

transmitting the first targeted advertisement to clients of the first subgroup;

transmitting the second targeted advertisement to the clients of the second subgroup;

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presenting to the clients of the first subgroup the first

targeted advertisement in conjunction with the program; and

presenting to the clients of the second subgroup the

second targeted advertisement in conjunction with the program.

5

67. The method of claim 55, wherein the plurality of

targeted advertisements are delivered from a plurality of

advertisement servers.

10   68. The method of claim 58, wherein the streaming media

program is a "live" program.

69. The method of claim 58, wherein the streaming media

program is an "on-demand" program.

15

70. A method for delivering targeted advertisements

during a streaming media program, the method comprising:

forming a group of subscribers requesting said streaming

media program;

20   forming a plurality of subgroups of said group of

subscribers;

selecting a first targeted advertisement for a first

subgroup and selecting a second targeted advertisement for a

second subgroup; and

transmitting to the first subgroup, the targeted

advertisement selected for the first subgroup, and transmitting

to the second subgroup, the targeted advertisement selected for

the second subgroup, such that the targeted advertisement

5   selected for the first subgroup is presented to the first

subgroup in conjunction with said streaming media program and

the targeted advertisement selected for the second subgroup is

presented to the second subgroup in conjunction with said

streaming media program.

10

71.   The method of claim 70, further comprising:

transmitting the streaming media program to the group of

subscribers.

15   72.   The method of claim 70, wherein the streaming media

program and the targeted advertisements are combined and

transmitted together from one or more locations upstream from

the subscribers.

20   73.   The method of claim 70, wherein the streaming media

program and the targeted advertisements are combined at the

subscriber receiver.

74. The method of claim 70, wherein the targeted advertisements and the streaming media program are transmitted in the same channel.

5   75. The method of claim 70, wherein the targeted advertisements are transmitted in a separate channel from the streaming media program.

76. The method of claim 75, wherein the targeted
10 advertisements are delivered via a low bandwidth channel.

77. The method of claim 70, wherein the streaming media program is an audio program.

15   78. The method of claim 77, wherein the audio program is an Internet radio station.

79. A method of delivering targeted advertisements in conjunction with a program stream, the method comprising:

20   transmitting a first targeted advertisement to a first subgroup of client receivers using [a] an Internet multicast protocol, wherein each of the first subgroup receivers belong to a first multicast subgroup; and

transmitting a second targeted advertisement to a second

subgroup of client receivers using [a] an Internet multicast

protocol, wherein each of the second subgroup receivers belong

to a second multicast subgroup.

5

80. The method of claim 79, wherein an intermediary

receives the program stream, inserts targeted advertisements

destined for a subgroup multicast, and multicasts the new

presentation stream to the subscribers in that multicast

10 subgroup.

81. The method of claim 79, wherein the targeted

advertisements are requested or received from a plurality of

different targeted advertisement servers.

15

82. A method of delivering targeted advertisements in

conjunction with a program stream, the method comprising:

transmitting a first targeted advertisement to a first

subgroup of client receivers using a multicast protocol,

20 wherein each of the first subgroup receivers belong to a first

multicast subgroup; and

transmitting a second targeted advertisement to a second

subgroup of client receivers using a multicast protocol,

wherein each of the second subgroup receivers belong to a

25 second multicast subgroup;

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wherein the program stream, the targeted advertisements, or both are delivered over a DOCSIS channel.

83. The method of claim 79, further includes inserting the targeted advertisements in the program stream at a client side.

84. The method of claim 83, wherein the targeted advertisements are inserted into the program stream before the program is decoded.

85. The method of claim 83, wherein the client side is provided with the insertion time and the identification of the targeted advertisements.

86. A method of delivering targeted advertisements in conjunction with a streaming media program, the method comprising:

transmitting a first targeted advertisement to a first subgroup of client receivers using a multicast protocol, wherein each of the first subgroup receivers belong to a first multicast subgroup; and

transmitting a second targeted advertisement to a second subgroup of client receivers using a multicast protocol,

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wherein each of the second subgroup receivers belong to a second multicast subgroup.

87. The method of claim 79, wherein said program stream is
5   a live or other type of broadcast stream.

88.   The method of claim 79, wherein said program stream is an "on-demand" program stream.

10   89.   In a telecommunications network, a method for presenting targeted advertisements in conjunction with requested content material, the method comprising:

identifying a group for reception of at least one signal containing content material;

15   forming at least a first subgroup and a second subgroup, wherein members of the first subgroup share a first common IP multicast address and members of the second subgroup share a second common IP multicast address;

creating a first set of targeted advertisements for the
20   first subgroup;

creating a second set of targeted advertisements for the second subgroup;

combining the signal containing content material and the

first set of targeted advertisements to form a first

presentation stream;

combining the signal containing content material and the

5   second set of targeted advertisements to create a second

presentation stream;

transmitting the first presentation stream to the first

subgroup; and

transmitting the second presentation stream to the second

10   subgroup.

90.   The method of claim 89, wherein the transmission of

the first stream to the first subgroup is a first multicast

transmission and the transmission of the second stream to the

15   second subgroup is a second multicast transmission.

92.   The method of claim 89, wherein the said second

presentation stream is neither transmitted to nor received by

the first subgroup and said first presentation stream is

20   neither transmitted to nor received by the second subgroup.

93.   The method of claim 89, wherein said transmitting to

the first subgroup and said transmitting to the second subgroup

are performed at about the same time.

94.   The method of claim 89, wherein said combining occurs at a common central location.

95.   The method of claim 89, wherein said combining occurs
5   at separate locations.

96.   The method of claim 89, wherein said combining includes combining the targeted advertisements such that the temporal occurrence or sequence of the targeted advertisements
10   with respect to the content material is one from a group consisting of: before the content material, after the content material, or during and within the content material.

97.   The method of claim 96, wherein the first set of
15   targeted advertisements and the second set of targeted advertisements are combined with the content material at or about the same location within the content material sequence.

98.   The method of claim 89, wherein each subgroup
20   represents a target market.

99. The method of claim 89, wherein the subgroups are formed based on at least one attribute from a set of attributes

consisting of: geographic, demographic, psychographic, and preference attributes.

100. In a telecommunications network, a method for
5 presenting targeted advertisements in conjunction with requested content material, the method comprising:

identifying a group for reception of at least one signal containing content material;

forming at least a first subgroup and a second subgroup,
10 wherein the subgroups are formed based on at least one attribute from a set of attributes consisting of geographic, demographic, psychographic, and preference attributes deduced from a subscriber's IP address;

creating a first set of targeted advertisements for the
15   first subgroup;

creating a second set of targeted advertisements for the second subgroup;

combining the signal containing content material and the first set of targeted advertisements to form a first
20 presentation stream;

combining the signal containing content material and the second set of targeted advertisements to create a second presentation stream;

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transmitting the first presentation stream to the first

subgroup; and

transmitting the second presentation stream to the second

subgroup.

5

101. The method of claim 89, wherein the content material

comprises one or more default advertisements and during said

combining the default advertisements are substituted with the

targeted advertisements.

10

102. The method of claim 89, wherein the plurality of

selected targeted advertisements are delivered from a plurality

of advertisement servers.

15   103. The method of claim 89, wherein the subgroups are

disjoint and contain no members in common.

104. In a telecommunications network, a method for

presenting targeted advertisements in conjunction with

20 requested content material, the method comprising:

identifying a group for reception of at least one signal

containing content material, wherein the signal containing

content material is one or more streaming media programs;

forming at least a first subgroup and a second subgroup;

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creating a first set of targeted advertisements for the
first subgroup;

creating a second set of targeted advertisements for
the second subgroup;

5   combining the signal containing content material and the
first set of targeted advertisements to form a first
presentation stream;

combining the signal containing content material and the
second set of targeted advertisements to create a second
10   presentation stream;

transmitting the first presentation stream to the first
subgroup; and

transmitting the second presentation stream to the second
subgroup.

15

105. The method of claim 104, wherein the targeted
advertisements are streaming media advertisements.

106. The method of claim 104, wherein the streaming media
20   program is a "live" program.

107. The method of claim 104, wherein the streaming media
program is an "on-demand" program.

108. The method of claim 104, wherein the streaming media program is an audio program.

109. The method of claim 108, wherein the audio program
5 is an Internet radio station.

110. A method for presenting targeted advertisements in a telecommunications system, the method comprising:

forming a group of clients for reception of a streaming
10 media program;

forming a plurality of client subgroups based on the group, wherein each subgroup represents one or more target markets;

combining the streaming media program with a first
15 targeted advertisement directed to a first target market to form a first presentation stream;

combining the streaming media program with a second targeted advertisement directed to a second target market to form a second presentation stream;

20 transmitting the first presentation stream to a first subgroup; and

transmitting the second presentation stream to a second subgroup.

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111. The method of claim 110, wherein the transmission of the first stream to the first subgroup is a first multicast transmission and the transmission of the second stream to the second subgroup is a second multicast transmission, different

5   from the first multicast transmission.

112. The method of claim 110, wherein the client groups and subgroups comprise groups and subgroups of one or more media servers.

10

113. The method of claim 110, wherein the client groups and subgroups comprise groups and subgroups of one or more streaming media players.

15   114. A method for presenting targeted advertisements in a telecommunications system, the method comprising:

forming a first presentation stream with advertisements targeted to a first subgroup;

forming a second presentation stream with advertisements

20   targeted to a second subgroup, wherein the subgroups are formed using Internet multicasting protocol;

multicasting the first stream to the first subgroup; and

multicasting the second stream to the second subgroup.

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115. The method of claim 114, wherein the subgroups comprise one or more media servers.

116. The method of claim 114, wherein the subgroups
5 comprise one or more media players.